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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/708,658	11/09/2000	Nicholas Sheppard Bromer		3157

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EXAMINER

DRUAN, THOMAS J

ART UNIT

PAPER NUMBER

3724

DATE MAILED: 04/01/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/708,658

Applicant(s)

BROMER, NICHOLAS SHEPPARD

Examiner

Thomas J. Druan, Jr.

Art Unit

3724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 8-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-7, drawn to a plated blade body, classified in class 30, subclass 350.
  - II. Claims 8-13, drawn to the process of making an edge on a blade, classified in class 451, subclass 45.
  - III. Claims 14-16, drawn to a composite blade structure, classified in class 428, subclass 411.1.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I & III and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product of Invention I as claimed can be made by a materially different process such as creating a specular surface with an RF sputtering process, and the product of Invention III as claimed can be made by a materially different process such as one omitting a polishing step.
3. Inventions I and III are related as combinations. They are distinct because the combination of Invention I does not require a softer inner core of Invention III for patentability as evidenced by the omission thereof from Invention I, and the combination

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of Invention III does not require the hard, microscopically flat outer plate of Invention I for patentability as evidenced by the omission thereof from Invention III.

4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Mr. Bromer on 08 March 2002 a provisional election was made without traverse to prosecute the invention of I, claims 1-7.

Affirmation of this election must be made by applicant in replying to this Office action.

Claims 8-16 are withdrawn from further consideration by the examiner, 37

CFR 1.142(b), as being drawn to a non-elected invention.

#### ***Specification***

5. The disclosure is objected to because of the following informalities: page 8, line 18 says "intersection two planes" when it should most likely read --intersection of two planes--. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 5, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Williams.

Williams discloses the invention as claimed, including a blade comprising a substrate 1 including a specular surface, and a hard plate 3, made of ceramic such as vanadium carbide (column 4, lines 1-6), deposited on the specular surface. The specular surface of the substrate is polished flat with a surface finish of between 0.1RA and 2.0RA, or between 0.1 and 2.0 microns, which is on the order of a wavelength of light. The substrate is beveled towards a cutting edge 5 which would be straight, on the order of a wavelength similar to the surface finish, in a cutting direction. The hard plate has a thickness of about 2 microns, which is on the order of a light wavelength.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-3 and 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 4,933,058 to Bache et al. in view of USPN 3,754,329 to Lane.

Bache et al. discloses the invention substantially as claimed including a blade with a substrate 10 and a thin, hard plate 11 deposited on the substrate. The hard plate 11 is about 0.3 microns (3000 Å) (column 2, lines 65-68). Bache et al. discloses that the substrate can include a surface portion of chromium on a base portion of stainless steel to provide improved adhesion of the hard plate (column 5, lines 52-59).

Bache et al. does not disclose the reflectivity of the blade, the flatness of the hard plate, or the straightness of the cutting edge. Lane teaches that depositing chromium

on a blade using an RF sputtering method causes the individual chromium atoms "to seek out one particular location in the substrate and repel other atoms from that immediate area until the entire substrate is uniformly covered and thus attains a fine, even coating surface" (column 6, line 57 – column 7, line 25). It can be inferred that the chromium, also known for its reflective properties, flows into the surface area like a liquid to create a specular surface. As such, a layer deposited on top of the chromium layer would be microscopically flat on the order of a wavelength, including the part at cutting edge that would be straight on the order of a wavelength. It would have been obvious to use the RF sputtering of Lane in order to produce a uniform coating.

10. Claims 1, 2, and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 3,911,579 to Lane et al.

Lane et al. discloses the invention substantially as claimed, including a blade with a substrate, made of a base portion 101 and a surface portion I, said substrate having deposited thereon a thin, hard plate II. Said surface portion is glass (column 5, lines 55-65).

Lane et al. does not mention if the surface portion I of the substrate comprises a specular surface. Since the glass will take on the characteristics of the base portion once it has been deposited, and since it is well known that razor blades are generally somewhat specular since a specular blade is sharper than a dull blade, it follows that the glass will be specular as well since it is preferable to have a sharp blade.

11. Claims 1, 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Williams.

**Conclusion**

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wallach et al. is cited to show a glass razor blade. Seager, Warner et al., are cited to show examples of ceramic cutting blades. Gerber, Breslin, Parent et al., and Meckel are cited to show blades with a hard outer layer. Sutcu et al. is cited to show a razor blade with a glass outer layer. Ecer is cited to show a self-sharpening blade. Julien is cited to show a highly polished knife blade.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas J. Druan, Jr. whose telephone number is 703-308-4200. The examiner can normally be reached on M-F (8:30-6:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Allan N. Shoap can be reached on 703-308-1082. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9302 for regular communications and 703-872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.



tjd  
March 25, 2002



**BOYER ASHLEY  
PRIMARY EXAMINER**